

REMARKS/ARGUMENTS

Claims 1-36 are pending in the present application.

This Amendment is in response to the Office Action mailed May 21, 2008. In the Office Action, the Examiner rejected claims 1, 8, and 31 under 35 U.S.C. §112; and claims 1-34 under 35 U.S.C. §101. Reconsideration in light of the remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 112

In the Office Action, the Examiner rejected claims 1, 8, and 31 under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. MPEP § 2172.01.

Applicant respectfully disagree. As provided in MPEP § 2172.01, a “claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may be rejected under 35 U.S.C. 112, first paragraph, as not enabling. *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). See also MPEP § 2164.08(c). Such essential matter may include missing elements, steps or necessary structural cooperative relationships of elements described by the applicant(s) as necessary to practice the invention.” *Emphasis Added*.

Applicant respectfully submits that the Examiner has not pointed out elements in the claims that are described by the Applicant as necessary to practice the invention. As provided in MPEP §2172.01, this description must be in the specification or in other statements of record, and is not based on the Examiner’s personal opinion.

Since the Examiner failed to identify elements “described by the Applicant as necessary to practice the invention”, the rejection under 35 U.S.C. § 112 is improper.

In addition, the Examiner states that the apparatus of claims 1 and 31 refers to the transmitter having the components of claims 1 and 31 and the apparatus of claim 8 refers to the receiver having the components of claim 8. The Examiner argues that since the disclosure teaches that the transmitter 120 may be a software module (Specification, par. [0023]) and the receiver 140 may be a software module (Specification, par. [0025]), the structural cooperation of

claims 1, 8, and 31 are not clear since electronic form and source are not components of an apparatus (Office Action, page 3-4).

Applicant respectfully disagrees. The Specification states that “all or part of an embodiment of the invention may be implemented by hardware, software, or firmware, or any combination thereof.”(Specification, par. [0075]). Thus, although it is stated that the receiver and the transceiver may be software modules, Applicant has not elected to claim that embodiment in claims 1, 8, and 31. Instead, Applicant has elected to claim in the apparatus claims 1, 8, and 31 elements including a buffer, a selector, and an analyzer (claim 1); an input/output module, feedback generator, a decoder (claim 8); and means for storing, means for selecting and means for analyzing (claim 31) (Office Action, page 3).

Therefore, Applicant respectfully requests the rejection under 35 U.S.C. §112 be withdrawn.

Rejection Under 35 U.S.C. § 101

In the Office Action, the Examiner rejected claims 1-34 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Applicant respectfully disagrees.

1. Claims 1-10 and 31-34; and 11-20

The Examiner argues that claims 1, 8, and 31 do not apply its abstract idea to produce a useful, concrete, and tangible result (Office Action, page 4, paragraph 5). Similarly, the Examiner further alleges that claims 11 and 18 do not require any transformation and reduction of an article “to a different state or thing” nor are the claims tied to a particular machine that transforms data in such a way to produce a useful, concrete and tangible result (Office Action, pages 6-7, paragraph 6). Applicant respectfully disagrees. According to Interim Guidelines for Examination of Patent Applications for Subject Matter Eligibility (“Guidelines”), claims 1-10, 11-20, and 31-34 are statutory under 35 U.S.C. §101.

A claimed process is statutory if it is limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting *Diamond v. Diehr*, 450 U.S. at 192, 209 USPQ at 10). See also *Alappat* 33 F.3d at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) (“unpatentability of the principle

does not defeat patentability of its practical applications") (citing *O'Reilly v. Morse*, 56 U.S. (15 How.) at 114-19). A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful. See *AT&T*, 172 F.3d at 1358, 50 USPQ2d at 1452, MPEP 2106 IV.B.2.

The Guidelines states: To satisfy section 101 requirements, the claim must be for a practical application of the § 101 judicial exception, which can be identified in various ways: (1) The claimed invention "transforms" an article or physical object to a different state or thing; (2) The claimed invention otherwise produces a useful, concrete and tangible result, based on the factors discussed below.

Applicant submits that the claimed invention transforms an article or physical object to a different state or thing, or alternatively, produces a useful, concrete, and tangible result.

a) Physical Transformation

Claims 1, 8, 11, 18, 31, and 35, recite, among other things: (1) a buffer to store at least a default stream coded by a multiple description (MD) coding and a restart stream coded by a predictive coding, the default and restart streams corresponding to a media content; (2) a selector coupled to the buffer to select a transmit frame from the default and restart streams according to a transmission status, the transmit frame being transmitted to a receiver; and (3) an analyzer coupled to the selector to provide the transmission status based on feedback information provided by the receiver.

A buffer, a default stream, a restart stream, a media content, a transmit frame, a receiver, a transmission status, an analyzer, feedback information, and a receiver are all physical entities. All of these are physical objects, not abstract ideas like democracy, freedom, or capitalism.

Storing a default stream and a restart stream in a buffer is a transformation that converts the location of the default and restart streams into a storage location of a buffer. Selecting a transmit frame from the default and restart streams according to a transmission status is a transformation that converts the default and restart streams into a transmit frame. Providing the transmission status based on the feedback information is a transformation that generates the transmission status from the feedback information provided by the receiver.

Since all three operations (storing a default stream and a restart stream, selecting a transmit frame, and providing the transmission status) represent physical transformations of physical entities (default stream, restart stream, media content, buffer, etc...) or reduction of the default and restart streams in a media content to a different state or thing (e.g. the transmission status), the claimed invention satisfies the physical transformation requirement. Thus, the claimed invention is statutory.

b) Useful, Concrete, and Tangible Result

In determining whether the claim is for a “practical application,” the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is “useful, tangible and concrete.” (Guidelines, page 20). Here, the final result of the claimed invention is the provision of the transmission status. The performed action is useful, tangible, and concrete.

Useful: For an invention to be “useful” it must satisfy the utility requirement of section 101. The USPTO’s official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP § 2107 and *Fisher*, 421 F.3d, 76 USPQ2d at 1230. Here, the utility of the claimed invention is specific, substantial, and credible. It is specific because it aims at a specific task of achieving multimedia content delivery using pre-stored multiple description coded video with restart. It is substantial because it solves a significant problem in multimedia delivery. It is credible because it provides a novel technique using methods that may be verified or confirmed by persons skilled in the art such as buffering, selecting, and providing status.

Tangible: The tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. In other words, the opposite meaning of “tangible” is “abstract.” Here, the claimed invention produces a real-world result because the performed action results in delivering multimedia content to the end user. It does not represent an abstract idea such as democracy, freedom, or capitalism.

Concrete: The “concrete” requirement means that the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. The opposite of “concrete” is unrepeatable or unpredictable. Here, the claimed invention is

substantially repeatable and predictable. As long as there are a default stream coded by a MD coding and a restart stream coded by a predictive coding, the result of providing the transmission status is substantially repeatable and predictable.

In summary, the claimed invention satisfies all the statutory requirements under 35 U.S.C. § 101 as provided by the Guidelines.

In addition, the Examiner alleges that since the apparatus in claims 1 and 31 is a transmitter which may be a software module and the apparatus in claim 8 is a receiver which may be a software module, the claims are directed towards “software per se” and thus, are non-statutory. Applicant respectfully disagrees.

As provided above, the Specification states that “all or part of an embodiment of the invention may be implemented by hardware, software, or firmware, or any combination thereof.”(Specification, par. [0075]) and Applicant elected to claim embodiments of the invention in the claims which include a buffer, a selector, an analyzer, means for storing, means for selecting, and means for providing. Accordingly, the claims are not non-statutory merely because the Specification provides an embodiment of the invention wherein the transmitter and/or the receiver may be a software module.

2. Claims 21-30

The Examiner contends that the Specification allows the machine-accessible medium to be any medium that can transmit or transfer information such as a radio frequency link or fiber optic medium (Office Action, page 8). However, the specification provides for alternative means. Paragraph [0074] recites:

“The ‘processor readable or accessible medium’ or ‘machine readable or accessible medium’ may include any medium that can store, transmit, or transfer information. Examples of the processor readable or machine accessible medium include an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk, a fiber optic medium, a radio frequency (RF) link, etc.”
(Specification, paragraph [0074]). *Emphasis added.*

Since there are alternative means, applicant may elect to claim any one of them. Claim 21 recites “a machine-accessible storage medium” which clearly embodies a storage medium,

and not just any medium. A storage medium is clearly statutory. Several examples of a storage medium are provided in the specification such as an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk (Specification, paragraph [0074]). Thus, claims 21-30 are directed to statutory subject matter.

Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §101 be withdrawn.

Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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